

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027422**Date Inspected:** 09-Apr-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

8E PP70.5 E2-A-LSW (Interior)

This QA Inspector randomly observed Quality Control (QC) Inspector John Pagliero perform a Magnetic Particle (MT) inspection of the West Longitudinal Stiffener (LSW) at 8E PP70.5 E2 on the interior of the OBG. It was noted that Mr. Pagliero found no rejectable indications. Mr. Pagliero also performed an ultrasonic inspection (UT) of the welds and found them to be acceptable. This QA Inspector performed an MT Inspection on the LSW at the same location on the interior of the OBG. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications. This QA Inspector performed a UT inspection on approximately 10% of the welds on the LSW at 8E PP70.5 E5 on the interior of the OBG. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

Tower 13M Weld #112

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

This QA Inspector randomly observed ABF welder James Zhen operating a Lincoln track mounted wire feeder to perform Submerged Arc Welding (SAW) in the 1G position on the diaphragm plate weld # 112 at the 13M elevation on the Tower. QC Inspector Fred Von Hoff stated the pre-heating of the joint was applied to 225° F prior to the commencement of welding and the parameters were recorded as 550 amperes at 32.5 volts with a travel speed of 380mm/min equaling a heat input of 2.8 joules/mm. This QA Inspector observed the baking oven for the ESAB EN 760 Flux and noted the temperature setting at 200° F. On a subsequent observation, this QA Inspector observed ABF welding personnel recycle the flux utilizing a vacuum hose and cleaning the edge of the work with a chipping hammer between passes. Mr. Zhen was observed adjusting the path of the feeder prior to each consecutive pass during the ongoing process and inspected each completed pass for indications and workmanship. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was in progress and appeared to be in general conformance with ABF-WPS-D1.5-4062-1 and the contract specifications.

### Tower 9M NDT Inspection

This QA Inspector performed an MT Inspection on weld #'s 059-1, 059-2, 060 and Fit Lug # 091 between the South and the West shaft of the Tower at elevation 9M. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

### Summary of Conversations:

As noted above.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

---

**Inspected By:** Frey,Doug

Quality Assurance Inspector

---

**Reviewed By:** Levell,Bill

QA Reviewer